Boswell Bay White Alice Site
Boswell Bay Alascom Site/49COR312
Chugach National Forest
Cordova vicinity
Valdez-Cordova
Alaska

HAER No. AK-21

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PHOTOGRAPH

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
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Washington, D.C. 20013-7127

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HISTORIC AMERICAN ENGINEERING RECORD

Boswell Bay White Alice Site
(Boswell Bay Alascom Site/49COR312)

HAER No. AK-21

Location: Chugach National Forest, Valdez-Cordova, Cordova vicinity, Alaska

UTM: A Zone 06 Easting: 546525 Northing: 6698500
B Zone 06 Easting: 548375 Northing: 6699300
C Zone 06 Easting: 548510 Northing: 6698450
D Zone 06 Easting: 546575 Northing: 6697750

Boundaries defined above are those provided by the Department of the Air Force to the Bureau of Land Management in order to reserve the site from selection by Native Corporations under the provisions of Section 3(e) of the Alaska Native Claims Settlement Act of 1971 (P.L> 92-203) as amended. These are boundaries of the developed site and considered justifiable by the Air Force for continued operation of the facility. They are, therefore, considered justifiable for purposes of this determination.

Date of Construction: 1954

Architect: Western Electric Company

Owner:

Original Use: Defense/military facility

Present Use: Vacant; not in use

Significance: The Boswell Bay White Alice Site (49COR312) is significant because it played an essential part in the air defense system for the United States as one of the communication links between the radar stations of the District Early Warning (DEW) Line and the military command centers and air fields in Alaska and the Lower 48. It is also significant as a representative of a type of technology and facility which was considered state-of-the-art for a very short period of time (1954-1971) and has since been supplanted by a more efficient and sophisticated system.

Although less than 50 years old, the Boswell Bay White Alice Site (49COR312) is important because of the vital role it played in national defense and because it is an example of a technology that evolved so rapidly that its development, achievement peak, and obsolescence was contained within one generation. Militarily, the White Alice and Distant Early Warning (DEW) Line systems are excellent examples of the extent to which the nation will go to avoid another Pearl Harbor. In the field of communications, it represents the state-of-the-art technology of its time. The Boswell Bay site attained its significance during the Cold War era. This period actually began immediately after World War II (WWII), but the phrase "Cold War" was not applied to the international situation until March 1947. A cold war is defined as "a conflict carried on by methods short of sustained military action and usually without breaking off diplomatic relations. [New Collegiate Dictionary, 1977]

During this period, the United States was kept in a high state of military preparedness. The civilian population were trained in civilian defense, minimizing the effects of a nuclear attack, and psychologically keyed to a state of war.

> "The Japanese surrender did not end the need for a strong military presence in Alaska. The Soviet Union quickly took advantage of postwar confusions and uncertainties to assert its dominance in Eastern Europe and parts of the Far East.
>
> In early 1949, the Joint Chiefs of Staff concluded that all nations capable of waging war on the U.S. were located north of the 45th parallel. The shortest attack route lay across the polar regions, and the only means of countering the attacks was an air defense system stretching across Canada and Alaska. By the end of 1949, the Soviets had developed an atomic bomb and the means for delivering it. Alaska, because of its location, was astride anticipated bomber routes and, therefore, played a key role in the developing Cold War and a polar concept for defense.
>
> In addition to the Alaskan Aircraft Control and Warning System, the Air Force had embarked on a program to build a system of distant early warning radar sites across the Canadian arctic and northern Alaska. This would provide early warning against bomber attacks coming over the polar regions. Construction of the Distant Early Warning (DEW) Line, as it became commonly known, was begun at Barter Island in 1953. The entire system of six main, 20 auxiliary, and 28 intermediate stations was declared fully operational in October 1957. It stretched from Cape Dyer on Baffin Island, Canada, to Cape Lisburne in Alaska.
>
> The Alaskan Air Command (AAC) was assigned operational responsibility for the Alaska segment, which, in addition to the main station on Barter Island, included the auxiliary stations of Oliktok, Lonely, Point Barrow, Wainwright and Point Lay.
>
> In January 1957, the Joint Chiefs of Staff authorized two extensions to the DEW Line. One would stretch across Greenland, and the other would be located on the Alaska Peninsula and the eastern Aleutians. Work was started on the Aleutian segment shortly afterwards. It consisted of the main station at Cold Bay and auxiliary stations at Port Heiden, Port Moller, Cape Sarichef, Driftwood Bay, and Nikolski. The segment became operational in April 1959 and was turned over to the operational control of AAC the following month. The command maintained control of the Aleutian segment until it was deactivated in 1969. The northern Alaska segment, however, was transferred to the control of the Air Defense Command in February 1958. By the late 1950s, the air sovereignty of Alaska and the rest of the North American continent was protected by an extensive system of air defense radars. All together, there were 18 aircraft control and warning sites and 12 DEW Line sites." [Cloe and Monoghan, 1984]

The Aircraft Control and Warning and the DEW Line systems were tied together by an extensive communications system known as White Alice.

"When the Aircraft Control and Warning System was first proposed, the Alaska Air Command communications planners had hoped that the Army would expand the Alaska Communications System to accommodate the radar system. The Army, however, was reluctant to do this because of limited funding. So, AAC was left with the problem of developing its own system.

The high frequency system used to link the temporary radar sites was unreliable because of atmosphere disturbances. Initially, the communications planners looked at the possibility of using microwave, but that was quickly rejected because of the cost. A microwave system would have required repeater sites every 50 miles or so, a monumental task because of the wide dispersion of the sites and the vast distances involved.

For a while, very high frequency communications seemed to be the answer. A series of tests, nicknamed Opportunity Strikes, was carried out. The system was initially proven effective; however, on closer examination, it was found wanting. It was subject to the same atmospheric disturbances as high frequency.

Major Gen. George R. Acheson, who assumed command of AAC in February 1953, found the communications situation appalling. Discovering a better solution to this problem became one of his major concerns. After several false starts, an Alaskan Communications Study Group, comprised of representatives from various Alaskan military and federal agencies, was formed to develop a list of recommendations for improved communications between the radar sites. The group completed its work in May 1954 and submitted its report to the Secretary of Defense.

The report was sent to AT&T with instructions to develop a reliable communications system for Alaska. The communications firm decided on a new system, called tropospheric scatter, which bounced radio signals off the troposphere. It had been proven reliable, and it required fewer repeater stations than any of the existing systems, a vital consideration for Alaska." [Cloe and Monoghan, 1984]

"Unlike conventional radio transmissions which depended on radiating electronic signals along the earth's surface and bouncing them off the ionosphere (the layer of the atmosphere closest to the earth's surface) back to earth to be picked up by antennas, White Alice at first depended on tropospheric scatter. In this system of transmission, huge antenna (like drive-in movie screens) reflected high power radio signals to the troposphere (the layer of atmosphere between the ionosphere and the stratosphere). While conventional radio signals often did not reach their intended objectives for various reasons, only a tiny portion of a White Alice signal had to be recaptured to complete a transmission. Later, microwave radio links, dependent on line-of-sight transmission, were added to White Alice but over 5,000 miles of its route operated through tropospheric scatter." [Antonson and Hanable, 1985]

"AT&T submitted its recommendation to the Defense Department in November 1954. It was accepted, and Western Electric Company was awarded the contract to build a system of tropo and microwave sites which would connect Alaska's air defense system.

The Western Electric Company began work in 1955. It was a monumental task. It took three years and some 3,500 people to complete. Twenty-five tropo stations were constructed in widely scattered and isolated locations throughout that state, and a system of microwave repeater sites was built along the road network in southcentral Alaska. The total cost was $140 million.

On 28 March 1958, Territorial Governor Mike Stepovich, flanked by Lt. Gen. Joseph H. Atkinson, commander, Alaskan Command; Brig. Gen. Kenneth H. Gibson, commander, AAC; and other notables, picked up the ringing telephone on the stage in the Talkeetna Theater on Elmendorf AFB. On the line was Secretary of Interior Frederick Seaton. His message of congratulations was broadcast to the assembled audience. The White Alice system was officially dedicated.

White Alice continued to be expanded until the early 1960s, there were 49 tropo sites in the system." [Cloe and Monaghan, 1984].

A total of 69 stations in all were completed, not all of which utilized the tropospheric scatter technique. [Colt Denfeld, U.S. Army Corps of Engineers, personal communication, June 1, 1987]

"An extension was constructed down the Aleutians to support the Aleutian DEW Line segment, Adak Naval Base, and Shemya AFB. The A and B routes were built to link the Clear Ballistic Missile Early Warning site with the NORAD Combat Operations Center near Colorado Springs, Colorado. A Route ran down the spine of southeast Alaska and connected to an undersea cable to Smuggler's Cove near Ketchikan. B Route, a system of microwave repeater sites, followed the Alaska Highway and then ran across Canada to the Lower 48. The Aleutian extension and the A and B routes became operational in 1961.

The following year, the Alaska Switching System became operational. This provided a direct dialing capability to 50 Air Force locations throughout Alaska.

The rapidly-expanding White Alice system was initially managed by the Integrated Communications System, Alaska, which was a joint agency formed in 1956, under the Alaskan Command, to coordinate long-line communication requirements in Alaska. The responsibility was transferred to the Alaskan Communications Region on 1 January 1962. The region has been activated the previous July, when the Air Force Communications Service became a separate Air Force major command. The region was responsible for managing and operating Air Force communications and air traffic control facilities in Alaska.

The region's responsibilities mushroomed on July 1, 1962, when it absorbed the Alaska Communications System. The system, which Brig. Gen. Billy Mitchell had helped to build as a young Signal Corps lieutenant, had been operated for 60 years by the U.S. Army Signal Corps, and it was the only federally-owned communications system that supported the private sector. The transfer of responsibility for the operations and maintenance of this system was a part of the general transfer of long-line communications responsibility from Army to Air Force control. The Alaskan Communications Region also inherited 657 civilian and 323 Army personnel, which brought its strength up to 2,323. The system remained under Air Force control until 18 January 1971, when it was formally transferred to the Radio Corporation of America, Alaska. In 1969, RCA had agreed to buy it for $129 million and to spend another $128 million for capital improvements. Shortly afterwards, RCA formed RCA Alascom to manage and operate the system. The Alaskan Communications Region, its role greatly reduced, was inactivated 1 June 1972, and its function and responsibilities were assumed by the 1931's Communications Group.

Almost immediately, the Air Force began negotiations with RCA Alascom to purchase the White Alice Communications System. After protracted negotiations, RCA Alascom agreed to lese White Alice from the Air Force with the option to purchase those sections required to support the satellite communications system being built at the time. In turn, the Air Force would lease back communications needed to support its Alaskan bases and sites. By 1981, all tropo sites had been replaced with commercially-owned satellite terminals. The tropo sites were turned back to AAC for disposal. On August 25, 1983, the final sales agreement was signed by Acting Secretary of the Air Force Tidal W. McCoy. This ended Air Force and federal ownership of long-line communications in Alaska." [Cloe and Monaghan, 1984]

> "White Alice was of limited benefit to Alaska's civilian population. Its circuits were only available to the 15 communities adjacent to White Alice sites that had previously been served by the Alaska Communications System (which the Army had transferred to the Air Force in 1962). Even so, by the early 1960s, White Alice's 6,000 route miles could absorb no more civilian traffic." [Antonson and Hanable, 1985]

The Boswell Bay White Alice site is a part of the detection and communication system bridging the North American continent and is directly related to the DEW Line. A determination of eligibility has been done on the DEW Line sites in Alaska (7) by the Department of the Air Force and the State Office of Historic Preservation and found to be eligible for the National Register.

The Boswell Bay White Alice Station is situated at Kenny Cove, Hinchinbrook Island in Prince William Sound, Alaska. it is 18 air miles west of Cordova in a wilderness setting; the station is accessible only by boat or small aircraft. The station's isolated setting helps define its character. It is divided into five components: the first (communications level) is at a 780-foot elevation, on top of an unnamed mountain and contains huge antennas a radio tower, two communication buildings, and several smaller structures. The massive angular antennas dominate the skyline, are visible from many miles away and are distinctly out of place in their setting. Construction of this portion required removing the top of the mountain to create sufficient level ground for the station. The second component is at about the 600-foot (residential) level and is defined by two dormitories, a fuel tank and a small pump house for the fresh water well. The third component, on the beach level, contains a warehouse, fuel handling facilities, several deteriorating or ruined buildings, and a garage-shop which burned down in 1984. The fourth component is the airfield, with its wood frame airplane hanger and collapsed office. The fifth component is 1.11 miles of graveled road and parking lots that connects the three levels. The entire station is a single, self-contained unit that was almost self-sufficient: a year's supply of diesel fuel was delivered at a time; shops and materials were available to repair damaged equipment; food preparation, shelter and recreation facilities were provided for operating crews that remained on site for 10-month tours of duty. The significant elements of the station are in excellent condition and retain their integrity of location, design, setting, materials, workmanship, fecling and association. There have been minor modifications but these are part of the history of the station.

Of the 69 White Alice stations originally constructed in Alaska, about 40 belong to Alascom, Inc., 15 to the Air Force and the rest are in private ownership. The Air Force is rapidly dismantling their stations under the Defense Environmental Restoration Program. The station at Boswell Bay is allegedly the most intact installation of its kind in the state, most other having been demolished or vandalized beyond the point of National Register significance. [Colt Denfeld, Army Corps of Engineers, personal communication, June 1, 1987]

PRESENT AND HISTORIC PHYSICAL APPEARANCE

The communication site is located at the top of an unnamed hill about 780 feet in elevation above sea level and about 1.5 miles from Kenny Cove. It is comprised of six tropospheric scatter antennas, four antenna feed horns, two buildings connected by an enclosed walkway, a radio tower, a fire control building with a water storage tank, a diesel fuel storage tank.

Four of the 6 antennas are 60-foot square tropospheric (tropo) scatter antennas (reflectors) commonly known as "billboards" and their associated antenna feed horns. Each antenna is made up of individual 2x4-feet panels bolted together, as are all other components of the antennas. Made of heavily galvanized steel set upon reinforced concrete foundations, they re massive in scale and in excellent condition, even the bolts. Ladders provide access to the top of the antennas and catwalks allow movement along their upper edges. The feed

horns, which aim the radio signal at the center of the "billboards," are constructed of the same quality galvanized steel as the antennas and equally well anchored in concrete. Shimming blocks were used to help adjust the aim of the signal. There are also two smaller disk-shaped tropo antennas, commonly known as "orange peels." The name indicates the surface character of the antenna, which is made up of wedge shaped panels bolted together to form a concave dish.

> "The communication building contains the ante-room, radio equipment room, storage room, and power house. The building measures 36' x 212', and was built in 1957. It is steel framed with insulated walls and corrugated aluminum siding on a concrete foundation. The roof is tarred corrugated steel over wood sheathing and steel girders. Its low profile, general lack of windows and extraordinarily sturdy construction provide testimony to its ability to withstand snow loads and violent storms with winds up to 140 miles per hour.
>
> Entry to the communication building is through a small, central Arctic passage containing two doors. The ante-room, approximately 30' x 30' with high ceilings, provides an assembly area and space to remove rain and winter gear. The room is essentially unfurnished except for a desk, two work benches and a free-standing 10' x 10' testing cubicle for electronic equipment that is sheathed against interference with copper screening. The radio equipment room lies through a central doorway in the northwest wall; the storage room is to the southeast; a hall leading to the electric power house extends along the back, northeast wall; the entrance to the covered corridor to the radio relay building is also located on the northeast wall. The radio and telephone room have asphalt tile floors, sheetrock walls and painted plywood ceiling. The ante-room and storage room has asphalt tile floors, sheetrock walls and painted plywood ceiling. The powerhouse and generator room have painted concrete floors with sheetrock walls and ceiling." [Follett and Associates, 1976]

The radio equipment room is a large open room with bays of radio equipment arranged to create a central corridor. A metal grid, suspended from the ceiling provides support for the tall equipment bays. The operator's handsets and switching equipment are located in the front portion of the central corridor. Central to the operation of the radio equipment were two Klystron tubes (since removed). These are large tubes (6" to 12" in diameter nd from 2" to 4" in length) that amplified the outgoing radio signal to a strength necessary for final transmission to the troposphere. They were a greatly enlarged form of an ordinary vacuum tube which plugged into a socket. These were located in cabinets toward the rear of the central corridor. Several banks of wet cell storage batteries in glass cases are located in the southwest corner of the room. The rest of the room is taken up with bays of radio equipment. The door to a small manager's office is located in the northeast corner.

The power generating room contains five, 150 KW, six-cylinder Chicago Pneumatic diesel generators, a control panel covering about half the length of the room, and a CO2 fire suppression system. The floor is set about 5' lower than the rest of the building; conduit for overhead lights and pipes for the fire extinguisher system fill the ceiling area. The huge diesel engines dominate the room, each is about 20' long and 10' high. They supplied all the power for the site. After the station closed down its tropo scatter communication system in 1971, only one generator was used, with a second on standby as backup. The other engines were simply drained of antifreeze and oil, and "mothballed." The fire suppression system consists of CO2 tanks piped together and arranged to fill the room with CO2 if the release handle was pulled.

The integrity of the communications building is almost complete. Clipboards still hang in the radio equipment room with notations made by the last crew. Gurneys loaded with tools and spare parts remain in the aisles. The fuses have been removed from their holders in the equipment bays; the Klystron tubes have been removed from their cabinets by the demolition contractor. Spare parts are still stacked on the shelves of the storage room. One diesel engine and generator in the power room was partially torn down for repair during the last

days of operation. The engine and parts laid out beside it remain in place. Log sheets, carrying mechanics' observations and comments still hang near the engines.

A steel radio tower with a reinforced concrete foundation is situated on a scraped off portion of the mountain top. It is approximately 20 square feet at its base and is painted in alternating red and white bands of about 10 foot intervals. The tower is about 70' high. It provided line-of-sight radio communications to the immediate area.

> "The fire control building measures 12' x 16', has concrete foundation and floor, insulated corrugated aluminum sided walls, insulated corrugated aluminum roof, and the interior walls and ceilings are painted plywood. This building houses the necessary equipment and gasoline powered pump for fire control at the communications center level. Adjacent to the fire control building is a 38,000 gallon water storage tank". [Follett and Associates, 1976]

Finally, there is a large radio relay building and enclosed walkway connecting it with the communications building.

The residential level area is composed of a dormitory building, a transient personnel building, a diesel fuel storage tank, and a fresh water well.

> "The **Dormitory Building** is about 1/2 mile by road from the communication building and about 200 feet lower elevation. This is a one-story building that measures 36' 141' and contains a kitchen, a dining and recreation area, a food storage room, a walk-in freezer, a walk-in cooler, 9 two-man bedrooms, a community bathroom, a storage room, a library room, and a linen room.
>
> The building has a concrete foundation, insulated corrugated aluminum sided walls, and insulated tarred corrugated steel roof. It has double hung frame windows with storm windows and screens.
>
> The kitchen has asphalt tile floor, painted sheetrock walls and ceiling, stainless steel counters, cupboards and sink, dishwasher, grill and oven. Adjacent to the kitchen is a 6' x 10' walk-in cold storage room, and a 12' x 18' walk-in freezer.
>
> The dining-recreation area has asphalt tile floor, sheetrock walls, acoustical ceiling, and panel fluorescent lights. The bedrooms have asphalt tile floor, sheetrock walls and ceiling and fluorescent lights. The bathroom has asphalt tile floor, painted sheetrock walls and ceilings, and contains three sinks, one urinal, two toilets, two showers and one janitor sink.
>
> The storage room, library and linen rooms are all finished similar to the bedrooms. The building is heated with an oil-fired forced air furnace, and the boiler room has painted concrete floor with sheetrock walls and ceiling.
>
> Built onto one end of the building is a 12' x 15' room of single construction that houses an electric transformer.
>
> The **Transient Personnel Building** is adjacent to the Dormitory Building. It measures 16' x 54' and has a concrete foundation, insulated frame walls with cedar and T-111 exterior siding, and a tarred corrugated steel roof. This building contains three bedrooms, a storage room, small kitchen and a 3/4 bath with shower, sink and toilet. The kitchen has a free-standing steel unit containing a range, oven, refrigerator and sink.
>
> There is a 126,000 gallon diesel storage tank located near the Dormitory Building. This tank is interconnected with the tank at the top of the hill and the tank at the beach level.

The buildings and facilities at the beach level include a garage-shop, warehouse, diesel oil pumphouse and diesel oil and gasoline storage tanks. Diesel oil is delivered to the station by barge, and is then pumped into a 126,000 gallon tank located near the beach. It is then pumped up the hill to the storage tanks located near the dormitory and communications building.

The **Warehouse Building** measures 40' x 78' and has corrugated steel siding and roof, 1/2 concrete floor and 1/2 dirt floor for a track vehicle garage, and is heated with oil-fired forced air furnace, Connected to this building is a small electric power plant that houses two 22KW Detroit diesel power generators. This power plant supplies electric power for the buildings at this level of the station.

The **Garage-Shop Building** (destroyed by fire in 1984) measured 28' x 36' and had insulated corrugated aluminum - sided walls and tarred corrugated aluminum roof. It had a concrete floor with steel strips embedded in the floor for steel track vehicles. The interior walls and ceiling were sheetrock. It was heated with an oil--fired forced air furnace, and had incandescent lights. There was one 14' x 12' overhead door, a two-fixture bathroom and an attached 12' x 12' storage addition for welder and oil storage.

The **Diesel Oil Pumphouse** fulfills the function to transfer fuel oil from a barge to the 126,000-gallon storage tanks. This building measures 12' x 26', has concrete foundation and floor, aluminum siding and roof, with the interior walls and ceiling lined with sheetrock. It houses a six-cylinder Caterpillar diesel engine and pump." [Follett and Associates, 1976]

The wood-frame **Boat House** is in poor condition and has not been maintained since Alascom acquired the site in 1970.

The **airfield**, approximately 3,000 feet long, is a later addition, being constructed in about 1968. The earliest landing strip was probably the flat, sandy beach followed by a short strip built upon fill which had been pushed out into the bay. Tidal action gradually compromised this strip, so the present airfield was constructed. The gradual incline of its surface is felt to reflect the most economically feasible point of construction given the terrain. [Rohert Evanson, site caretaker, personal communication, June 1, 1987] , Associated with it are a wood frame airfield office and a small wood frame airplane hanger. The airfield office is partially collapsed and deteriorating rapidly. The small airplane hanger is in poor condition but currently houses an aircraft

"The station maintained 1.11 miles of road from the beach level to Communication Building Station level, and there are about 1.4 acres of gravel parking lot and a driveway.

Nearly all of the existing facilities at Boswell Bay were built in 1957, with some additions including the runway (about 3,000 feet long) after that date. The entire station (except as noted above) is in good condition inside and out. It has been very well maintained and shows little physical deterioration." [Follet & Associates, 1976]

Of the seven buildings on the site which do not contribute to its significance, one is currently occupied by the caretaker, five are in ruins, and one is in poor condition.

The Boswell Bay White Alice sit is a representative example of all White Alice sites utilizing the tropospheric scatter communication technique. While differing in details of construction materials (some were constructed of cinder blocks) and site orientation of components, all were bound by a common mission and basic operating procedures. Accessibility to various sites differed considerably. Some could be reached only by boat, others only by air, some by road, and others by a mix of all three. It is representative of a specialized design; overbuilt to withstand arctic conditions, low maintenance costs with expensive shipping costs and isolated in setting.

At this writing, May 1987, the site is still in good condition, although some buildings and equipment containing hazardous materials (PCBs and asbestos) have had the materials removed from them.

BOSWELL BAY WHITE ALICE SITE (49COR312)
Feature Index List

Components:
1. Communication Site
2. Residential Area
3. Warehouse Area
4. Airfield Area
5. Road System

* Contributing
**Non-Contrib.
ITEM corresponds to orientation map of site.

ITEM	COMPONENTS		BUILDINGS		STRUCTURES	
			CON.*	N-CON.**	CON.*	N-CON**
A.	All	Oblique View of Site				
B.	All	Vertical View of Site				
1.	1	Power Plant & Equipment Building	1			
1a	1	Ante-Room, Equipment Building				
1b	1	Electronic Equipment Building				
1c	1	Generators in Power Plant Building				
1d	1	Fire Fighting Building, Power Plant Building				
1e	1	PCB Transformers				
2.	1	Enclosed Walkway	1			
3.	1	Tower			1	
4.	1	Tropospheric Antennas ('Orange Peel')			2	
5.	1	Tropospheric Antennas ('Billboards')			4	
5a	1	Tropospheric Antenna ('Billboards')				
6.	1	Antenna Feed Horn			4	
7.	1	Fire Control Building	1			
8.	1	Diesel Fuel Storage Tank			1	
9.	1	Water Storage Tank			1	
10.	2	Dormitory	1			
10a	2	Bedroom in Dormitory				
10b	2	Bathroom in Dormitory				
10c	2	Stainless Steel kitchen in Dormitory				
10d	2	Recreation/Dining Room in Dormitory				
11.	2	Transient Housing	1			
12.	2	Pump House at Well (No photo)	1			
13.	2	Diesel Storage Tank			1	
14.	3	Warehouse	1			
15.	3	Garage-Shop (Destroyed by fire in 1984)		1		
16.	3	Boathouse (First bunkhouse) (No photo)	1			
17.	3	Pacific Hut Ruins (No photo)		1		
18.	3	Building Ruins and Outhouse (No photo)		1		
19.	3	Building Site (Ruins) (No photo)		1		
20.	3	Animal Shelter Ruins & Fenced Area (No photo)		1		
21.	3	Caretaker's Home (No photo)		1		
22.	3	Diesel Storage Tank			1	
22a	3	Diesel Fuel Pump House			1	
23.	3	Gasoline Storage Tank			1	
24.	4	Airstrip (about 3000' long)			1	
25.	4	Airport Hanger (No photo)	1			
26.	4	Airfield Office (Ruins) (No photo)		1		
27.	5	Road System (1.11 miles)			1	
28.	5	Gravel Parking Lot & Driveway (1.4 Acres)				1
		TOTALS	9	7	19	1

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1976 Boswell Bay, Cape Yakataga, Hoonah Smuggler Cove, "A" Route of the White Alice Communication System, Southeast Alaska Appraisal Report 76-147. Anchorage, Alaska.

Western Electric Company
1958 The White Alice Network Plan of Operation. Defense Projects Division. New York.

BOSWELL BAY RADIO RELAY SITE

Legal Description

Parcel No. 1

Commencing at a monument known as "ALCO," thence N. 52 degrees 31'E., for a distance of 3,780', to the True Point of Beginning, said point being the S.W. corner of said parcel. Thence North for a distance of 800'; thence East for a distance of 1100'; thence South for a distanee of 140', more or less to a point on the mean high waterline, and being called point "A", for further reference herein below; then returning to said point of beginning; then West for a distance of 1100'; thence North for distance of 130', more or less, to a point on the mean high waterline; thence Northerly along said line for a distance of 900', more or less, to said point "A", described herein above.

Containing 16.82 aeres, more or less.

Parcel No. 2

Commencing at a monument known as "ALCO," thence West for a distance of 250' to the True Point of Beginning; thenee North for a distance of 850'; thence East for a distance of 1600; thence South for a distance of 1300'; thence West for a distance of 1600'; thence North for a distance of 450' to the True Point of Beginning.

Containing 47.75 acres, more or less.

Parcel No. 3

A strip of land 15' wide, lying 7.50 on each side of the following described centerline:

Commencing at a monument known as "ALCO", thence West for a distance of 250'; thence South on the boundary lines of above describcd Parcel No. 2 for a distance of 450'; thence East for a distance of 1600'; thence North for a distance of 710' to the True Point of Beginning of said centerline; thence on said centerline No. 17 degrees 40' E., for a distance of 452.2'; thence N. 23 degrees 57' E., for a distance of 827.7'; thence No. 00 degree 12' E., for a distance of 374.8'; thence N. 56 degrees 49' E., for a distance of 171.6'; thence N. 82 degrees 42' E., for a distance of 650.4'; then No. 66 degrees 02' E., for a distance of 529.1'; thence No. 37 degrees 03' E., for a distance of 106.9' to a point on the south boundary of above described Parcel No. 1 and the terminus of centerline; said point being East, a distance of 170', as measured along said boundary line, from the True Point of Beginning of said parcel. The sidelines of said strip are to be prolonged or shortened, so as to terminate on the East line of said Parcel no. 2 and the said South line of Parcel No. 1.

Containing 1.08 acres, more or less.

Parcel No. 4

A strip of land 100' wide, lying 50' on each side of the following described centerline:

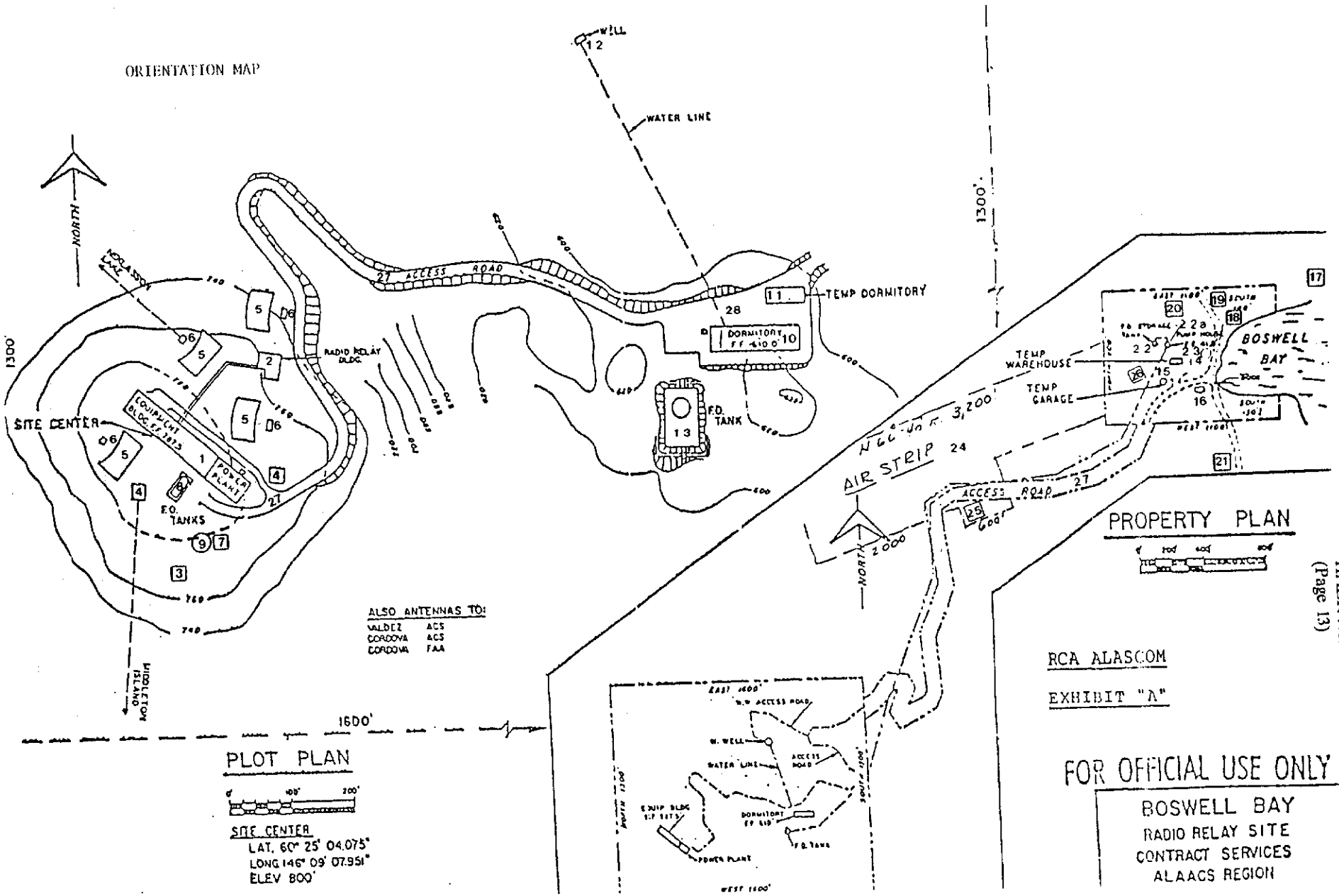
Commencing at a monument known as "ALCO," thence West for a distance of 250'; thence North on the boundary line of above described Parcel No. 2 for a distance of 850'; thence East for a distance of 1600'; then South for a distance of 184.2'; to the True Point of Beginning of said centerline; thence on said centerline N. 66 degrees 18' E., for a distance of 62.4'; thence N. 38 degrees 08' E., for a distance of 159.9'; thence S. 89 degrees 31' E., for a distance of 92.5'; thence S. 23 degrees 50' E., for a distance of 46.8'; thence S. 27 degrees 16' W., for a distance of 118.9'; thence S. 38 degrees 36' E., for a distance of 68.0'; thence N. 74 degrees 57' E., for a distance of 160.5'; thence N. 23 degrees 31' E., for a distance of 87.0'; thence N. 03 degrees 39' W., for a distance of 303.7'; thence N. 14 degrees 49' E., for a distance of 158.1'; thence N. 29 degrees 04' E., for a distance of 187.4'; thence N. 13 degrees 58' W., for a distance of 210.6'; thence N. 02 degrees 48' W., for a distance of 242.7'; thence N. 55 degrees 02' E., for a distance of 120.3'; thence N. 81 degrees 22' E., for a distance of 408.7'; thence S. 87 degrees 22' E., for a distance of 275.3'; thence N. 76 degrees 12' E., for a distance of 337.5'; thence N. 61 degrees 49' E., for a distance of 265.4'; thence N. 22 degrees 41' E., for a distance of 134.5'; thence N. 33 degrees 57' E., for a distance of 60.6'; to a point on the south boundary of above described Parcel No. 1 and the terminus of said centerline; said point lying East a distance of 269.4', as measured along said boundary line, from the point of beginning of said parcel. The sidelines of said strip are to be prolonged or shortened, so as to terminate on the East line of said Parcel No. 2 and the said South line of Parcel No. 1.

Containing 76.7 acres, more or less, of which 0.28 of an acre is included in the description of Parcel No. 3.

Parcel No. 5

A strip of land 33' wide and 900' long, more or less; said strip being a winter access road traversing easterly and northeasterly along the mean high waterline of Kenny Cove, from the easterly boundary of the above described Parcel No. 1.

Contains 0.68 acres, more or less.



Boswell Bay White Alice Site
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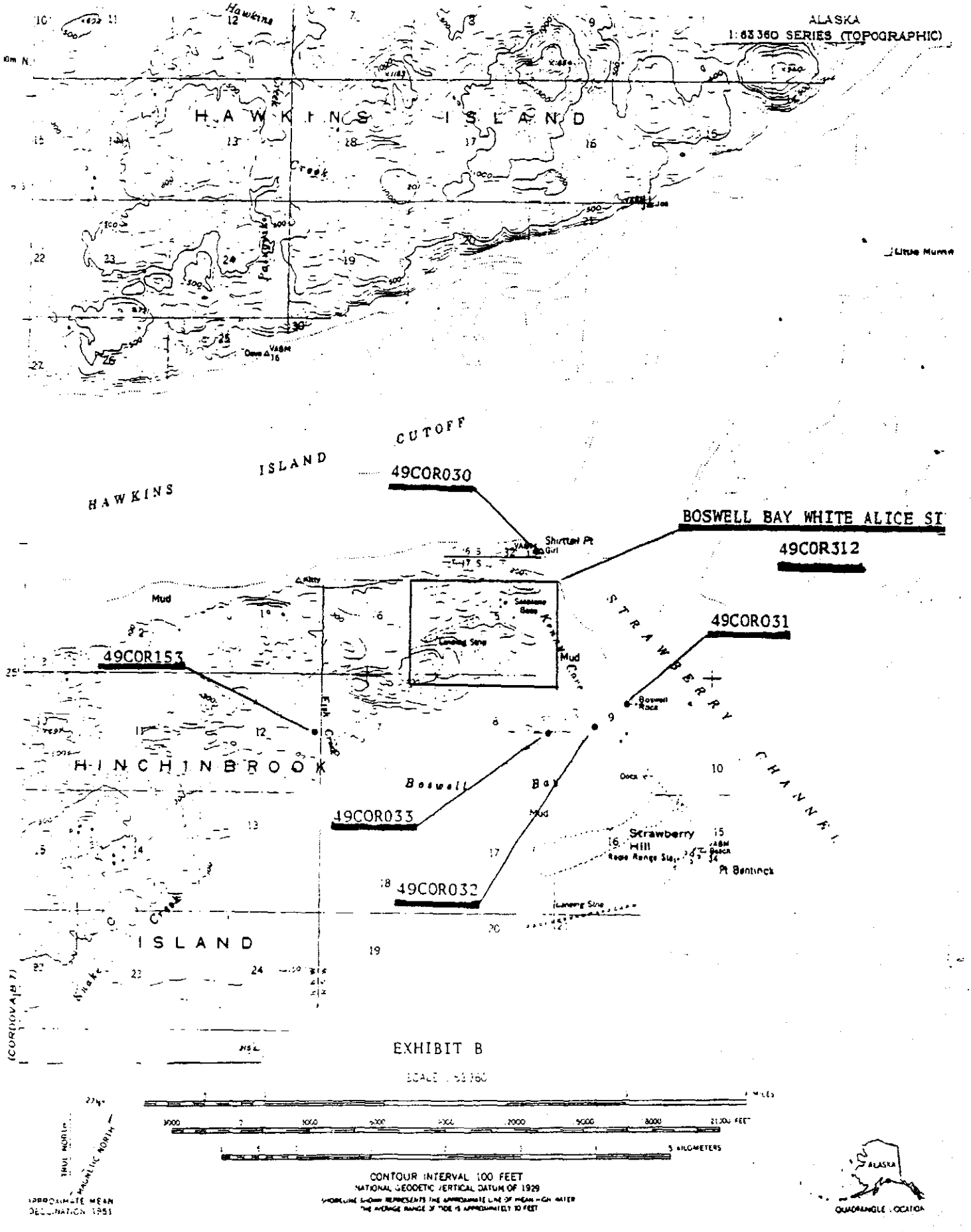
ALASKA
1:63360 SERIES (TOPOGRAPHIC)
HAWKINS ISLAND
CUTOFF
ISLAND
HAWKINS
49COR030
BOSWELL BAY WHITE ALICE SI
49COR312
49COR031
49COR153
49COR033
49COR032
HINCHINBROOK
ISLAND
STRAWBERRY CHANNEL
Boswell Bay
Strawberry Hill
Pt Bentinck
Shirttail Pt
Mud
Creek
EXHIBIT B
SCALE 1:63360
CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
APPROXIMATE MEAN DECLINATION 1951
ALASKA
QUADRANGLE LOCATION


Parcel 6
Air Strip
Parcel 5 = Road
& Winter Access
Parcel 1
Parcel 4 = Road
100' ROW
Parcel 3 = Pipeline
15' wide
Runs between Parcel 1
and Parcel 2.